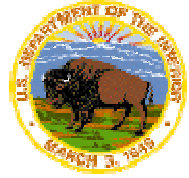




U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
FLESHY OWL'S-CLOVER
Castilleja campestris ssp. *succulenta*



CLASSIFICATION: Threatened

Federal Register Notice 62:14338; March 26, 1997

http://ecos.fws.gov/docs/federal_register/fr3057.pdf (125 KB)

STATE LISTING STATUS AND CNPS CODE:

This subspecies was listed as endangered by the California Department of Fish and Game in September 1979, under the name succulent owl's-clover. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range), also as succulent owl's-clover.

CRITICAL HABITAT: Originally designated in Federal Register 68:46683; August 6, 2003.

The designation was revised in 70:46923; August 11, 2005. Species by unit designations were published in 71:7117, February 10, 2006.

www.fws.gov/policy/library/2006/06-1080.html

www.fws.gov/policy/library/2006/06-1080.pdf (6.6 MB)

RECOVERY PLAN: Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon; December 15, 2005.

http://www.fws.gov/sacramento/es/recovery_plans/vp_recovery_plan_links.htm

5-YEAR REVIEW: Initiated March 5, 2008



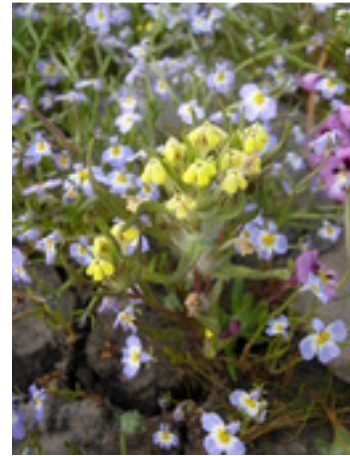
Fleshy Owl's-Clover
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DESCRIPTION:

Fleshy owl's-, also known as succulent owl's-clover, is an annual herb in the snapdragon family (Scrophulariaceae). Its stems are erect, generally 5 to 25 cm (2-10 inches) tall, and may be branched or unbranched. The leaves are succulent and brittle. Branches end in dense, short, green inflorescences. Bright yellow to white flowers appear in May.

Like other members of *Castilleja* and related genera, it is partly parasitic (hemiparasitic) on the roots of other plants. It occurs on the margins of vernal pools, swales and some seasonal wetlands, often on acidic soils. It is never dominant and it is found in only a few of the pools in an area.

The species' range overlaps that of the related *Castilleja campestris* ssp. *campestris* in Stanislaus County, but the latter can be distinguished by its usually more brittle leaves, shorter bracts,



Fleshy Owl's-Clover
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larger corollas and longer stigmata. See Hickman (1993) in General Information about California Plants, below, for a detailed description of both species.

VERNAL POOLS:

Vernal pools are a unique kind of wetland ecosystem. Central to their distinctive ecology is their ephemeral nature. Vernal pools fill with water temporarily, typically during the winter and spring, and then disappear until the next rainy season.

In California, where extensive areas of vernal pool habitat developed over a long geological timeframe, unique suites of plants and animals have evolved that are specially adapted to the unusual conditions of vernal pools. Fish and other predators are among species that have been excluded evolutionarily by annual filling and drying cycles of vernal pools.

The prolonged annual dry phase of the vernal pool ecosystem also has prevented the establishment of plant species typical of more permanent wetland ecosystems.



DISTRIBUTION:

Succulent owl's-clover is found only in vernal pools along the rolling lower foothills and valleys along the eastern San Joaquin Valley in the Southern Sierra Foothills Vernal Pool Region.

U.S. Geological Survey 7.5 Minute Quads: Humphreys Station (377B) 3611984, Friant (378B) 3611986, Round Mountain (378D) 3611975, Lanes Bridge (379A) 3611987, Gregg (379B) 3611988, Fresno North (379D)* 3611977, Millerton Lake West (398C) 3711916, Millerton Lake East (398D) 3711915, Daulton (399C) 3711918, Le Grand (400B) 3712022, Berenda (400C) 3712012, Owens Reservoir (420C) 3712032, Haystack Mountain (421A) 3712043, Yosemite Lake (421B) 3712044, Merced (421C) 3712034, Planada (421D) 3712033, Winton (422A) 3712045, Cressey (422B) 3712046, Snelling (440C) 3712054, Merced Falls (440D) 3712053, Cooperstown (441A) 3712065, Lockeford (478B) 3812122 (* Presumed extirpated)

THREATS:

Habitat loss and fragmentation are the largest threats to the survival and recovery of vernal pool species. Loss of habitat generally results from urbanization, agricultural conversion and mining.

Habitat loss also occurs in the form of habitat alteration and degradation as a result of changes to natural hydrology, invasive species, incompatible grazing regimes, infrastructure projects (e.g., roads, water storage and conveyance, utilities), recreational activities (e.g., off-highway vehicles and hiking), erosion, contamination and inadequate management and monitoring.

Invasive nonnative species pose a significant threat. Exclusion of grazing from sites that have been grazed historically may increase the threat of nonnative plants.

REFERENCES FOR ADDITIONAL INFORMATION:

[General references about California plants](#)

www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

Vollmar, J. E. (editor). 2002. Wildlife and rare plant ecology of eastern Merced County's vernal pool grasslands. Merced, California: Merced County UC Development Office.

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